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## *Humiles*, a New Section of *Pleione* (Orchidaceae)

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**ABSTRACT.** Two sections in the genus *Pleione* D. Don are recognized here. The acceptance of *Pleione praecox* as the lectotype of the generic name *Pleione* (J. E. Smith) D. Don makes *Pleione* sect. *Dictyopleione* synonymous with *Pleione* sect. *Pleione*. A new name, *Pleione* sect. *Humiles* G. Zhu & S. C. Chen, is proposed for the other section represented by *P. humilis* (J. E. Smith) D. Don, which is described here. A key to sections and a list of currently recognized species of the genus are provided.

*Pleione* D. Don (Orchidaceae, Coelogyneae) is a small genus of great beauty. Nineteen species are currently recognized, occurring from the Qinling Mountains in central China, southeast to Taiwan, southwest to the Himalayas, and south to northern Thailand, Laos, and Vietnam in subtropical Asia. They grow in a wide variety of usually well drained habitats, on tree trunks, woody slopes, and on rocks and cliffs covered with mosses, occurring at altitudes from 600 to 4200 m. The plants are of great horticultural importance, because they all have one showy flower and are easy to cultivate and propagate by vegetative means. There have been many artificial hybrids reported in recent years. There are also modern revisions of this economically important genus (Cribb et al., 1983; Cribb & Butterfield, 1988). The present paper deals with an unresolved nomenclatural problem of the sections in the genus.

*Pleione* was established by David Don (1825) based on two Himalayan species previously described by James E. Smith, namely *Epidendrum praecox* and *E. humile*. However, there was no indication of a type species. Half a century later, Ludovicus Pfeiffer (1874) cited the species *Epidendrum praecox* J. E. Smith after the generic name *Pleione*. According to his introductory comments at the start of the work, Pfeiffer used this method to indicate types, and the species *Pleione praecox* (J. E. Smith) D. Don is here accepted as the lectotype

of the generic name *Pleione*. Subsequently, in Engler's *Das Pflanzenreich*, Ernst Pfitzer recognized 13 species of *Pleione*, which he placed in two sections: section *Eupleione* with 8 species and section *Dictyopleione* with 5 (Pfitzer & Kraenzlin, 1907). Unaware of Pfeiffer's earlier typification, Pfitzer placed *P. praecox* in his section *Dictyopleione*, and *P. humilis* (J. E. Smith) D. Don in section *Eupleione*. No type was designated for either sectional name. Until recently, this confusion of typification has puzzled some modern authors. For example, both *P. praecox* and *P. humilis* have been considered as types of the genus *Pleione* (Cribb et al., 1983; Cribb & Butterfield, 1988).

The two sections in *Pleione* are well defined and widely accepted. According to the *International Code of Botanical Nomenclature* (Greuter et al., 1994, Article 22.1), a name of any subdivision of a genus that includes the type of the adopted, legitimate name of the genus to which it is assigned is to repeat that generic name unaltered as its epithet. Therefore, the acceptance of Pfeiffer's designation of *Pleione praecox* as the lectotype of the name *Pleione*, as by the *Index Nominum Genericorum* (Farr et al., 1979), automatically makes *Pleione* sect. *Dictyopleione* synonymous with *Pleione* sect. *Pleione*. This section, represented by *P. praecox*, includes the autumn-flowering species. The other section, typified by *P. humilis*, includes the spring-flowering species. The name *Pleione* sect. *Humiles* G. Zhu & S. C. Chen is here proposed for the latter section.

The current nomenclature and taxonomy of the genus *Pleione* may be summarized as follows:

***Pleione*** D. Don, Prodr. Fl. Nepal. 36. 1825. TYPE: *Pleione praecox* (J. E. Smith) D. Don, Prodr. Fl. Nepal. 37. 1825 [*Epidendrum praecox* J. E. Smith, Exot. Bot. 2: 73. 1806], (lectotype, designated by Pfeiffer (1874: 754)).

**Pleione** sect. **Pleione**

*Pleione* sect. *Dictyopleione* Pfitzer & Kraenzlin, in A. Engler, Das Pflanzenreich (IV. 50. II B. 7): Coelogyninae, 121. 1907. Nom. superfl.

1. ***Pleione lagenaria*** Lindley in Paxt., Fl. Gard. 2: 5. t.39. 1851. India (Assam).
2. ***Pleione maculata*** (Lindley) Lindley, Paxt., Fl. Gard. 2: 5. t. 39. 1851. Bhutan, Myanmar, China (Yunnan), India (Assam and Manipur), Sikkim, Nepal, and Thailand.
3. ***Pleione praecox*** (J. E. Smith) D. Don, Prodr. Fl. Nepal. 37. 1825. Bhutan, Myanmar, China (Yunnan and Xizang), N India, Nepal, and Thailand.
4. ***Pleione saxicola*** T. Tang & F. T. Wang ex S. C. Chen, Acta Phytotax. Sin. 25(6): 473, fig. 1. 1987. China (Yunnan).

***Pleione*** sect. ***Humiles*** G. Zhu & S. C. Chen, sect. nov. TYPE: *Pleione humilis* (J. E. Smith) D. Don, Prodr. Fl. Nepal. 37. 1825.

Pseudobulbis ovoideis vel ampulliformibus, unifoliis, vere florens.

Flowering in spring; pseudobulbs ovoid to flask-shaped, narrowed gradually at the apex, 1-leaved (2-leaved in *P. scopulorum*), never mottled or warted; basal sheaths of the inflorescence smooth.

5. ***Pleione albiflora*** Cribb & C. Z. Tang, Curtis's Bot. Mag. 184: 117. 1983. Myanmar, China (Yunnan).
6. ***Pleione bulbocodioides*** (Franchet) Rolfe, Orchid Rev. 11. 291. 1903. China (Anhui, Gansu, Guangdong, Guangxi, Guizhou, Sichuan, Yunnan, and Xizang).
7. ***Pleione chunii*** C. L. Tso, Sunyatsenia 1: 148. 1933. China (Guangdong and Yunnan).
8. ***Pleione confusa*** Cribb & C. Z. Tang, Curtis's Bot. Mag. 184: 126. 1983. China (Yunnan).
9. ***Pleione coronaria*** Cribb & C. Z. Tang, Curtis's Bot. Mag. 184: 123. 1983. Nepal.
10. ***Pleione formosana*** Hayata, J. Coll. Sci. Univ. Tokyo 30, art. 1: 326. 1911. China (Fujian, Jiangxi, Taiwan, and Zhejiang).

11. ***Pleione forrestii*** Schlechter, Notes Bot. Gard. Edinb. 5: 106. 1912. Myanmar and China (Yunnan).

12. ***Pleione grandiflora*** (Rolfe) Rolfe, Orchid Rev. 11: 291. 1903 (Oct.). China (Yunnan).

13. ***Pleione hookeriana*** (Lindley) B. S. Williams, Orch. Grow. Man. (ed. 6) 548. 1885. Bhutan, Myanmar, China (Guangdong, Guangxi, Guizhou, Yunnan, and Xizang), India (Assam), Laos, Nepal, Sikkim, and Thailand.

14. ***Pleione praecox*** (J. E. Smith) D. Don, Prodr. Fl. Nepal. 37. 1825. Myanmar, India (Assam and Manipur), and Nepal.

15. ***Pleione kohlsii*** Braem, Schlechteriana 2(4): 168. 1991. China (Yunnan). (= *Pleione forrestii* × *P. chunii*, hybr. nat.)

16. ***Pleione limprichtii*** Schlechter, Feddes Reper. Sp. Nov. Beih. 12: 346. 1922. Myanmar and China (Sichuan and Yunnan).

17. ***Pleione pleionoides*** (Kraenzlin ex Diels) Braem & H. Mohr, Orchis 65/66: 126. 1989. China (Guizhou, Hubei, and Sichuan).

18. ***Pleione scopulorum*** W. W. Smith, Notes Bot. Gard. Edinb. 13: 218. 1921. Myanmar, China (Yunnan and Xizang), and India (Assam).

19. ***Pleione yunnanensis*** (Rolfe) Rolfe, Orchid Rev. 11: 292. 1903 (Oct.). Myanmar and China (Guizhou, Sichuan, and Yunnan).

KEY TO THE SECTIONS OF *PLEIONE*

- 1a. Flowering in autumn; pseudobulbs turbinate, 2-leaved (1-leaved in *P. saxicola*), often mottled or warted; basal sheaths of the inflorescence inflated or warted . . . . . sect. *Pleione*
- 1b. Flowering in spring; pseudobulbs ovoid to flask-shaped, narrowed gradually at the apex, 1-leaved (2-leaved in *P. scopulorum*), never mottled or warted; basal sheaths of the inflorescence smooth . . . . . sect. *Humiles*

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